

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for engineering making cartilage tissue which comprises:

by two-dimensionally culturing bone marrow mesenchymal cells to confluence and subculturing the cells, three-dimensionally culturing bone marrow mesenchymal the cells in a simulated microgravity environment with the use of a uniaxial rotary bioreactor that realizes a simulated microgravity environment on the earth by compensating the ground gravity with the stress resulting from controlled rotation speed, and obtaining cartilage tissue expressing Type II collagen.

2. (original): The method according to claim 1, wherein the simulated microgravity environment provides gravity that is 1/10 to 1/100 of the ground gravity to an object on a time-average basis.

3. (currently amended): The method according to claim 1, wherein the simulated microgravity environment provides gravity that is 1/10 to 1/100 of the ground gravity to an object is attained with the use of a bioreactor that realizes a simulated microgravity environment on the earth by compensating the ground gravity with the stress resulting from controlled rotation speed.

4. (canceled).

5. (currently amended): The method according to claim [[4]]1, wherein the bioreactor that realizes a simulated microgravity environment on the ground is a Rotating Wall Vessel (RWV) bioreactor.

6. (previously presented): The method according to claim 5, wherein culture is conducted by seeding bone marrow cells at a density of 10^6 to 10^7 cells/cm³ at a rotation speed of 8.5 to 25 rpm when a 5 cm in diameter RWV vessel is used.

7. (previously presented): The method according to claim 1, wherein culture is conducted by adding TGF- β and/or dexamethasone to a culture medium.

8. (canceled).

9. (currently amended): The method according to claim 1, wherein the bone marrow mesenchymal cells are isolated from a subject in need of transplantation of the engineered cartilage tissue.

10. (new): The method according to claim 1, wherein the cartilage tissue has a major axis of 1 cm or more.

11. (new): The method according to claim 1, wherein the rotation speed is adjusted to synchronize with the sinking speed of the seeded cells to minimize the influence of the ground gravity on the cells.